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**REMARKS**

In the Office Action dated March 31, 2004, claims 1-8, 10, 13-15, 17-21, 23, 26-31, and 33 are pending. Claim 5 has been cancelled. Claims 1, 13, and 28 are independent claims from which all other claims depend respectively therefrom.

Claims 4 and 5 stand objected to because they contain the same limitations. Claim 5 has been cancelled.

Claims 1-8, 10, 13-15, 17-21, 23, 26-31, and 33 stand rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The Office Action states: (1) that the claimed invention is not within the technological arts and that it fails to promote the physical sciences as opposed to the social sciences, and (2) that the claimed invention does not produce a useful, concrete, and tangible result.

Claims 1, 13, and 28 are directed towards methods of developing a brand profile for a new product and for new automotive vehicles, respectively. As such claims 1, 13, and 28 include business method limitations or process steps to produce the stated result. The limitations recited in claims 1, 13, and 28 may be performed by a computer.

Section 101 of title 35, United States Code, provides:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefore, subject to the conditions and requirements of this title.

Referring to MPEP 2106, claims categorized as methods of doing business should be treated like any other process claims, *State Street*, 149 F.3d at 1374-75, 47 USPQ2d at 1602 (Fed. Cir. 1998). The term "process" means process, art, or method, and includes a new use of a known process. Applicants submit that the methods of

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the recited claims refer to new processes and/or improvements to known processes. In determining whether a recited method is a process Courts have found that abstract ideas are outside the four statutory categories of invention. It is recognized that subject matter that is not a practical application or use of an idea is not patentable. *Rubber-Tip Pencil Co. v. Howard*, 87 U.S. (20 Wall.) 498, 507 (1874). Applicants, respectfully, submit that throughout the specification of the present application and in the recited claims several practical applications are provided. Namely, the methods of claims 1, 13, and 28 are directed to product and automotive vehicle development applications, although they are not necessarily limited thereto. More specifically, the methods of claims 1, 13, and 28 recite methods of developing a brand profile for a particular product or automotive vehicle, which are generic and specific applications.

MPEP 2106 states that, in practical terms, claims define nonstatutory processes if they consist solely of mathematical operations or simply manipulate abstract ideas without some claimed practical application. *Warmerdam*, 33 F.3d at 1360, 31 USPQ2d at 1759. As stated above, multiple applications have been provided. Also, to meet statutory requirements, a claimed computer-related process must either: (A) result in a physical transformation outside the computer for which a practical application in the technological arts is either disclosed in the specification or would have been known to a skilled artisan or (B) be limited to a practical application within the technological arts. *Diamond v. Diehr*, 450 U.S. at 183-84, 209 USPQ at 6. Applicants submit that the claimed invention satisfies both (A) and (B) in that it provides a method of developing a new product or automotive vehicle the transformation of which are performed outside a computer and that it is limited to a practical application within the technological arts.

Applicants submit that the claims are limited to a practical application. For subject matter to be statutory, the claimed process must be limited to a practical

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application of the abstract idea in the technological arts. *Alappat*, 33 F.3d at 1543, 31 USPQ2d at 1556-57. Also, a claim is limited to a practical application when the method produces a concrete, tangible, and useful result. *AT&T*, 172 F.3d at 1358, 50 USPQ2d at 1452. As admitted in the 3<sup>rd</sup> full paragraph on page 3 of the Office Action, the claimed limitations do recite a process that produces a useful, concrete, and tangible result. Claims 1, 13, and 28 provide methods of developing a brand profile for a new product or in effect provide methods of developing a new product. In claims 1, 13, and 28 product attributes are grouped, placed into an attribute class, are used to generate a preferred product brand position, associated with a preferred competitive level, and used to generate product characteristics, which in turn are incorporated into the new product, which is a concrete, tangible, and useful result.

Applicants further submits that the claims are within the technological arts. All that is needed to make the claimed process statutory under 35 U.S.C. s 101 is "that it be in the technological arts so as to be in consonance with the Constitutional purpose to promote the progress of 'useful arts.'" *Musgrave*, 431 F.2d at 893, 57 CCPA at 1367, 167 USPQ at 289-90. It is not important whether the claims contain mental steps (the nonstatutory portion) or not if the process is within the technological arts. *In Re Benson*, 441 F.2d at 1015, 58 CCPA at 1004, 169 USPQ at 101. It is known that computers are in the technological field, are a part of one of our best-known technologies, and are in the "useful arts". *In Re Benson*, 441 F.2d at 688, 58 CCPA at 1143, 169 USPQ at 553. Applicants submit that since claims 1, 13, and 28 are directed toward the development of a new product and automotive vehicle and that since the limitations of claims 1, 13, and 28 may be performed by a computer, which is in the technological arts that the methods of claims 1, 13, and 28 are within the technological arts. It is of no consequence that the limitations of claims 1, 13, and 28 do not recite a computer or component thereof.

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The Office Action states that the claimed limitations do not apply, involve, use, or advance, the technological arts since all of the recited steps can be performed in person or by use of a pencil and paper and without the need of a computer or other technology. Applicants submit that ability to perform in person without a computer does not imply that the technological arts are not advanced. A process may be patentable, irrespective of the particular form of the instrumentalities used, which cannot be disputed.... *Cochrane v. Deener*, 94 U.S. 780, 787-788, 24 L.Ed. 139 (1877). The "transformation and reduction of an article 'to a different state or thing' is the clue to the patentability of a process claim that does not include particular machines." *Gottschalk v. Benson*, 409 U.S. at 70, 93 S.Ct. at 256. Thus, although a particular machine may not be used or recited within the limitations of claims 1, 13, and 28 that does not mean that the technological arts are not advanced. Applicants are unable to find any definition in which the method steps used in the development of a product or an automotive vehicle, which may be performed by a computer, are defined within the "social sciences", as is suggested by the Office Action.

Also, Applicants submit that the reliance for patentability in claims 1, 13, and 28 is not solely based upon the programming of a mathematical solution to a mathematical algorithm. The effect of the claimed invention does not preempt a mathematical formula or prevent others from making use of a mathematical procedure. The claimed invention is directed to the methodology utilized in developing a brand profile for a particular product. No mathematical formulas are recited or necessarily utilized.

Thus, claims 1, 13, and 28 claim statutory material that is patentable under 35 U.S.C. 101.

Claims 1-8, 13-15, 17-21, 26, and 27 stand rejected under 35 U.S.C. 102(b) as being anticipated by Cooper et al., "Building market structures from consumer preferences".

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Independent claims 1 and 13 have similar limitations and will therefore be discussed together. Claims 1 and 13 are directed towards methods of developing a brand profile for a new product and a new automotive vehicle, respectively. The method of claim 1 includes providing predetermined product attributes representing identifiable features of a generic product under consideration. Claim 13 includes a similar limitation but further specifies the inclusion of attributes from particular groups of vehicle characteristics. Claims 1 and 13 further include grouping the product attributes in response to customer-oriented market research. The attributes are placed in an attribute class corresponding to brand personality importance. Thereafter, a preferred product brand position is generated as a function of the attributes, which includes identifying a competitive set of products and associating the attributes with a preferred competitive level with respect to the competitive set. Target product characteristics are generated as a function of the classified product attributes and the preferred product brand position. The target product characteristics represent customer-driven objectives for each of the attributes to be incorporated into the new product or vehicle.

The claimed invention groups the product attributes in response to customer-oriented market research, the groups may include vehicle usage, driving experience, environmental, special features, design, as well as other customer-oriented market research groups. Attributes within each of these groupings may correspond to customer personal preference or customer opinion-based groupings or classes, such as rational, functional, emotional, brand personality and user stereotype, etc. For example, attributes within the vehicle usage grouping, such as interior roominess, ergonomics, and cargo space may also be considered functional attributes.

The claimed invention also places each attribute in an attribute class corresponding to brand personality importance. In so doing, each attribute is given a class identifier, such as being a "differentiator", being "important", or being a

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"given." Each of these classes generally identifies each attribute based on brand personality importance, providing personality differences between brands for all classified attributes.

Cooper is directed towards a model for combining switching probabilities used to identify competitive groups and attribute ratings to form a picture of how market structure is built. The competitive groups refer to groups of products across a market segment that are in direct competition. For example, as stated in Cooper, a competitive group may consist of the Lexus LS400, the Cadillac STS, and the Infinity Q45. Cooper provides the steps to generate a market structure model. Cooper does not provide steps to develop a brand profile or for that matter steps to develop a product, but rather simply provides an overall understanding of an existing market structure. Although the market structure model provided within Cooper may be utilized in the development of a brand profile, nowhere in Cooper is there any mention of how this is accomplished. Also, as is further expressed below, the market structure model of Cooper and steps to generate that model are clearly different than the recited limitations of claims 1 and 13.

The Office Action states that Cooper discloses grouping product attributes in response to customer-oriented market research and refers to page 3, paragraphs 2-5; page 7, paragraph 3; and Table 2 for such disclosure. On page 3, in paragraphs 2-5, Cooper discloses that consumers evaluate brands on the basis of their underlying values. Cooper states that in other words consumers evaluate a car on the basis of attributes such as sportiness or comfort. The evaluation of a product by a consumer on the basis of various attributes is not the same as the grouping of particular attributes, the grouping of particular attributes to form an attribute class, or the grouping of particular attributes to form an attribute class corresponding to brand personality importance. Whether a consumer prefers a particular vehicle based on the level of sportiness that the vehicle provides is distinctly different from the

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grouping of multiple attributes based on a desired brand personality to develop or produce a certain type of vehicle.

On page 7, paragraph 3, Cooper discloses the use of a brand-switching matrix and a brand-attribute matrix to generate the market structure model. Cooper mentions 12 categories of vehicles based on size, luxury, and whether they are domestic or foreign. Cooper also mentions attributes by which it averages data over each of the categories. Notice that the attributes are averaged over a particular category, which may contain many brands of products across a market segment. The averaging of attribute values over a particular car category is also different than the grouping of product attributes to develop a brand profile. For example, averaging the fuel economy of multiple vehicles within a category to provide an overall estimate of fuel economy for a vehicle within that category is different than selecting and grouping multiple attributes and specifics thereof, such as sporty, stiff suspension, average fuel economy, and high horsepower, into an attribute class to provide a brand profile.

Table 2 of Cooper simply discloses vehicle categories, as mentioned above and their averaged attribute values. In other words, average attribute values are provided for categories having multiple products of different brands.

The Office Action states that Cooper discloses placing each of the attributes in an attribute class corresponding to brand personality importance and in so doing refers to the abstract; page 7, paragraphs 3 and 4; and Table 2. Applicants submit that nowhere in the stated sections of or anywhere else in Cooper is the placing of each of the attributes into an attribute class corresponding to brand personality importance mentioned, taught, or suggested.

In the Abstract, Cooper states that by marrying two different types of data, namely switch probabilities and attribute ratings, that the model divides a market into several homogeneous submarkets in which consumers consider a distinctive

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subset of brands with a segment-specific rule for attribute evaluations and a segment-specific ideal point. In other words, Cooper as stated above provides an overall understanding of a certain type of product segment within a certain market. Average attribute values for products within that product segment are provided and may be used as an ideal point or as a reference point. The product segment model of Cooper does not group attributes corresponding to brand personality, but rather averages attribute values for a product segment, which may have multiple brands of products.

On page 7, paragraphs 3 and 4, and in Table 2, Cooper again discloses the averaging of attribute values over a product segment for a particular market and the desire to limit the number of attributes evaluated. There is no mention of grouping attributes in response to brand personality importance. Cooper does not even group attributes according to product segment, but rather provides average values of attributes for various product segments.

The Office Action further states that Cooper discloses the generating of a preferred product brand position as a function of the product attributes, including identifying a competitive set of products, and associating each of the product attributes with a preferred competitive level with respect to the competitive set and refers to page 1, paragraphs 2-3; page 2, paragraphs 1 and 4; page 10, paragraph 1; and Figure 2 for such reliance. Nowhere in the stated sections or anywhere else in Cooper is a preferred product brand position mentioned, suggested, or taught, let alone any of the other recited limitations.

On page 1, in paragraphs 2-3, Cooper discloses that trade-in data or switching probabilities have been used to identify competitive groups and the consideration of options within the competitive groups by consumers. A "competitive group" refers to similar competing products within a certain market segment. The products include multiple brands. Nowhere is brand position mentioned. Cooper does not



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mention the brand position of any of the products within the competitive group nor does Cooper suggest or teach any method of developing a brand profile of any one of the brands.

On page 2, paragraphs 1 and 4, Cooper discloses the combining of switching probabilities and attribute ratings and the diagnoses of the status of competition. In paragraph 1 Cooper obtains a segment-by-segment account of differences in competitive groups and evaluative criteria, obtains maps of market structure, obtains different ideal points, and a segment-by-segment account of which brands are gaining and which are waning. Although paragraph 1 discloses providing an account of which brands are performing better than other brands, paragraph 1 fails to disclose the generating of a preferred product brand position. Understanding which brands are performing better in a particular market segment is not the same as generating a preferred product brand position based on the grouping of certain attributes to develop a particular product brand profile. Knowledge or understanding that one brand is performing better than another brand, does not in and of itself provide one with a technique to develop a particular product brand, but merely suggests that one product is better accepted in a particular market.

In paragraph 4, Cooper discloses that five elements are emphasized in diagnosing the status of competition and in particular discusses the first element, which is the identification of competitive groups. The identification of competitive groups is irrelevant with regards to the generation of a preferred product brand position. As an example, the identification of a luxury/domestic group does not generate a brand position of the Cadillac STS.

On page 10, in paragraph 1 and in Figure 2, Cooper discloses the universal market and provides a plot illustrating product categories in relation to price and size. Again this is irrelevant with regards to the generation of a preferred product brand position. The relation between product categories which each contain

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products from multiple brands does not provide one with any knowledge regarding the brand position or profile of a particular product within a particular product segment.

Also, nowhere in the above-mentioned sections of Cooper is product attributes assigned with a preferred competitive level for a particular product brand of a new product. Although Cooper discloses averaging attribute levels across multiple brands for particular product segment, since Cooper does not disclose a method of developing a brand profile for a particular product, Cooper does not teach or suggest assigning and selecting desired competitive levels of attributes for a particular product brand under development.

The Office Action further states that Cooper discloses generating target product characteristics as a function of the classified product attributes and the preferred product brand position, the target product characteristics representing customer-driven objectives for each of the plurality of product attributes to be incorporated into the new product and refers to page 9, paragraphs 1 and 2; page 10, paragraphs 1 and 2; Table 5; and Figures 2 and 3. Applicants submit that nowhere in the stated sections or anywhere else in Cooper are the stated limitations mentioned, taught, or suggested.

On page 9, in paragraphs 1 and 2 and in Table 5 Cooper discloses the realignment between competitive categories and the parameter estimates and standard errors for all submarkets in the final model. Comparing competitive segments is not the same as generating target product characteristics. For example comparing subcompact/import cars with midsize domestic cars is different than determining the luxury level, the amount of horsepower, and the fuel economy of a new vehicle. Also, estimates and errors in the market structure model of Cooper are clearly different than the generation of target product characteristics.

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On pages 10 and 12, in paragraphs 1 and 2 and in Figures 2 and 3, Cooper discloses the universal market, forces underlying the trade-in data, and plots thereof. A model of the universal market of product segments does not provide individual target product characteristics, but rather a relationship between segments. The forces underlying the trade-in data, such as the size of products within a product segment, also does not provide individual target product characteristics. The ideal point referred to in Cooper is with respect to product segments not individual products.

Additionally, since Cooper does not teach or suggest the generation of a preferred product brand position, Cooper also does not teach or suggest generation of target vehicle characteristics as a function of the preferred product brand position.

Cooper is not directed towards or concerned with positioning of a brand, but is rather concerned with the development of a market structure model for various product segments. Thus, not only are the primary problems solved by Cooper and the present invention different, the methods as to how the problems are solved and elements involved therein are also different.

Thus, Cooper does not teach or suggest a majority of the limitations recited in claims 1 and 13, therefore Applicants submit that claims 1 and 13 are novel, nonobvious, and are in a condition for allowance. Applicants also submit that since claims 2-8, 14-15, 17-21, 26, and 27 depend from claims 1 and 13, respectively, claims 2-8, 14-15, 17-21, 26, and 27 are also novel, nonobvious, and are in a condition for allowance for at least the same reasons.

Claims 28-30 and 33 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Cooper and Eisner, "Essentials of Project and Systems Engineering Management".

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The Office Action relies on Cooper for the disclosure of all the limitations of claim 28 except that of providing a cross-functional product team for which it relies on Eisner. Since claim 28 includes all of the limitations of claim 13, since Cooper does not teach or suggest a majority of the limitations of claim 13, and since Cooper does not teach or suggest the limitation of a cross-functional product team, Cooper also does not teach or suggest a majority of the limitations of claim 28.

Eisner is directed towards interrelationships between project management and systems engineering. Eisner teaches an idea of "integrated product teams" with respect to team behavior and integrative management. Nowhere in Eisner is brand positioning discussed let alone the use of an integrated product team to generate a vehicle brand position. Referring to MPEP 2143.01, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). There is no suggestion in either Cooper or Eisner for any combination thereof nor does the combination of each reference allow one to arrive at the present invention as is claimed in claim 28, since each and every element of claim 28 is not taught or suggested by Cooper, Eisner, or a combination thereof.

Applicants now refer to MPEP 706.02(j) and submit that to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference must teach or suggest all the claim limitations. As stated above, all of the claimed limitations of claim 28 are not taught or suggested by Cooper and Eisner. There is no motivation or suggestion in either

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reference to make such combination and modify the stated references, as is necessary, to arrive at the claimed invention.

Therefore, claim 28 is also novel and nonobvious for the above-stated reasons and is now in a condition for allowance. Since claims 29-30 and 33 depend from claim 28 they are also novel, nonobvious, and are in a condition for allowance for at least the same reasons.

Applicants therefore submit that Cooper and Eisner fail to teach or suggest, separately or in combination, grouping product attributes in response to customer-oriented market research, placing each attribute in an attribute class corresponding to brand personality importance, generating a preferred product brand position including associating each attribute with a preferred competitive level, and generating target vehicle characteristics as a function of the attributes and the preferred product brand position. Cooper and Eisner also do not teach or suggest generation of target vehicle brand image characteristics. The Cooper and Eisner references do not contain each and every element in claims 1, 13, and 28 of the present invention, and therefore claims 1, 13, and 28 and any dependent claims thereof, including claim 31, are also novel, nonobvious, and allowable.

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In light of the amendments and remarks, Applicants submit that all objections and rejections are now overcome. The Applicants have added no new matter to the application by these amendments. The application is now in condition for allowance and expeditious notice thereof is earnestly solicited. Should the Examiner have any questions or comments, she is respectfully requested to call the undersigned attorney.

Respectfully submitted,

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